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Influence of Technological Advancement on Strategy Implementation in Real Estate Companies in Nakuru County, Kenya

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Abstract

A report released by the ministry of housing over the last five years concerning development of the real estate and mortgage industry indicates that the construction of new commercial and residential buildings in Kenya has been in the upward trajectory. The challenges include lack of approval for buildings during construction time, upsurge in population, financial constraints, personal/organizational interests and structure leading to stalled real estate projects and unoccupied complete buildings**.** This study sought to examine influence of technological advancement on strategy implementation in real estate companies in Nakuru, Kenya. The study adopted a descriptive research design with a target population of 234 employees and a sample size of 70 employees who were sampled using stratified random sampling technique. A structured questionnaire was used to collect data from the sampled employees whereby a pick and drop process was used to administer the questionnaires. The study used regression analysis and ANOVA to analyze the data and to test the research hypotheses. The findings indicated that, technological advancement significantly influenced strategy implementation ($F = 70.386$, $p< 0.05$). The study concluded that, technology advancement is critical in strategy formulation and implementation as it offers an integrated body of knowledge, ideas, and methods resulting from a variety of activities conducted in the pursuit of knowledge which promote strategy formulation and implementation. Further, technological advancement allows organizational IT skills to effectively implement the real estate company strategy. The study therefore recommended that the real estate companies should promote technology advancement and offer an integrated body of knowledge, ideas, and methods which allow acquisition of organizational IT skills to successfully promote effective implementation of strategy. The firms should also leverage a strategic technology approach will allow real estate companies to carve out a unique market position and prepare for future technological advancements through effective strategy implementation.

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1. Introduction

In today's business world, there exist a lot of challenges; these challenges prevent organizations from achieving their core objectives as conceived by the founders. The resource-based model assumes that with the bundle of unique resources and capabilities of the organization, the business organization will use them as a basis of their business strategy to earn above- average returns (Hitt, Hoskisson & Ireland, 2007). This study focuses on real estate companies. It is believed that housing structure is one of important organizational resources and the real estate industry provide this necessary asset, which provides accommodation for the companies and enable them execute their activities and supports their core businesses. According to Price water house Coppers (2015), the global investable real estate industry will expand substantially, leading to a huge expansion in opportunity, especially in emerging economies because of growing world population and increasing GDP per capita. According to PWC forecasts, investable real estate will have grown by more than 55% by 2020 compared to 2012, and it is also expected to expand by a similar proportion in the following decades. Africa is experiencing an explosive demographic growth combined with a rapid urbanization. According to Africa Development Bank (AFDB) (2011) most African countries, the delivery of urban housing cannot be met by the supply. Currently 62% of the population living in Africa cities lives in informal housing where basic services are poor or non-existent (CAHF, 2012). This rapid and uncontrollable urbanization has turned the housing industry into one of the most critical developmental issues facing policy makers not only in Africa but around the world. This is because of fast-growing cities which present a wider range of risk and return opportunities ranging from low risk or low yield in advanced economy real estate industry, to high risk/high reward in emerging economies. Competition for prime assets will intensify this phenomenon (Bochere, 2015). Despite the acknowledged importance of housing, Kenyan population has surged and the housing sector has felt the need to develop houses countrywide arising from demand that far surpasses supply particularly in urban areas (Njoroge, 2013). There is real competition among real estate companies in Kenya forcing such firms to be creative and more innovative to be competitive enough to attract tenants. Consequently, strategic management practices are considered necessary by management of these companies especially in a contemporary competitive marketplace (Alozairi & Aga, 2017). According to Moko and Olima (2014), the Kenyan market, like in many countries in Africa is characterized by a large demand and a chronic undersupply of formal housing because of rapid urbanization, demographics, and the under-supply of housing point to a consistent need for middle and low cost housing, where demand is highest and supply least according to the World Bank (2011). AFDB (2013) research findings indicate that there are only a handful of private developers in Kenya that can afford to finance medium to large scale developments of 200 units and above for middle to low-income segments. World Bank (2011) also noted that lack of affordable constructions combined with difficulties in accessing land makes it difficult to expand access to homeownership. The Hass Property Index (2013) has shown that the upper end of the market is highly saturated, and this price growth may not be sustainable in the future. Some of the big projects include Thika Greens Limited (TGL) stands on 1,135 acres of land in Thika, the $650 million golf estate will have 4,000 housing units when complete (Kubuta, 2014). Land prices in areas neighbouring cities and urban areas have skyrocketed, as sellers anticipate demand following the establishment of new amenities that will transform sleepy rural villages into mega urban estates for middle- and high-income earners. Lack of affordable houses has become a major problem in Kenya. Informal settlements and slums have continued to grow and a large percentage of the urban population lives there (Kubuta, 2014). Some of the challenges faced by the Kenyan real estate industry include ineffective government incentives on housing and insufficient fund to make housing affordable to low- income earners. Financing of the real estate industry at both the development stage and end- user finance is also a challenge. The limited financing in the real estate industry in Kenya has been characterized by fairly rigid financing options and relatively high interest rates. Therefore, real estate firms must develop competitive strategies in order to overcome the challenges and also achieve excellent performance (Wanjira, 2016). There are gaps identified in various studies which include; ways in which real estate companies can be empowered to compete on equal levels with established businesses and where the booming real estate companies can strategize to take advantage of the available resources to provide housing facilities development to accommodate the growing demand. Effective implementation of strategy occurs when organization, resources and actions are tied to strategic priorities and when key success factors are identified and performance measures and reporting are aligned to organization's objectives. Functional areas of organizations such as technological advancement contribute to strategy implementation. Despite recent indication that the real estate business in Kenya is performing well, there is evidence that certain challenges persist. These include amongst others, the lack of ICT integration in strategy implementation leading to stalled real estate projects and unoccupied complete properties**.** The existing evidence on the link between technological advancement and strategy implementation particularly in the real estate sector is lacking. Therefore, this study sought to examine organization capabilities that influence strategy implementation in real estate companies for competitive advantage in the market in Kenya.

2 Technological Advancement on Strategy Implementation

According to Barney and Clark (2007), technology refers to an integrated body of knowledge, ideas, and methods resulting from a variety of activities conducted in the pursuit of knowledge. The pace of new idea discovery depends on the body of accumulated knowledge and technological progress is frequently a sequence of small increments on a continuous path. Technology capabilities are organizational skills enabling the IT function deliver value to the various activities of the company. Technological capabilities such as internal relationships and technical capacity (Barney and Clark, 2007), are organizational skills that allow IT effectively deliver services using resources that are complementary The new technological progress is apparent through intensified investment in computer- processing and data preparation appliances in the manufacturing and service industries and telecommunications infrastructure, and also to its widespread usage in government agencies, educational organizations, and, more recently, in the household. As a result of this technological progress, the implementation and application of IT is a significant driving force in strategy implementation (Ghobakhloo, Hong, Sabouri & Zulkifli, 2006). According to Ghobakhloo, et.al (2006), IT will cover Information System (IS), Information and Communication Technology (ICT) and the Internet, as well as and their infrastructure, including computer hardware and software, and those technologies that process or transmit information to enhance the effectiveness of individuals and organizations. According to Waweru and

Omwenga (2015), stated that with the emergence of knowledge experts and industry innovations, the real estate industry has undergone tremendous technological changes that complement design and project construction work in almost any location, therefore having a direct influence on competition and market share. The study by Kihara, Bwisa, and Kihoro (2016 on the role of technology in strategy implementation and performance of manufacturing small and medium firms in Thika, Kenya found a positive relationship between technology and implementation of strategy that leads to performance of SME. They noted that technology was indeed a key driver that influence the performance of SMEs in the manufacturing sector in Kenya. In addition, a study undertaken by Mutua and Akeyo (2024) in the analysis of the effect of information technology on strategy implementation, control, and evaluation found that ICT infrastructure as a key driver for effective and efficient strategic management processes. However, they noted that the organization should carefully select the type of IT infrastructure, as a poor choice may introduce confusion and affect the flow of strategic management process. A firm with innovative knowledge has the capacity to bring to the market innovative products or services, making it a market leader (Rodgers, 2010). Several factors, including management's perception of and attitude on IT, support and commitment, IT knowledge and experiences, innovativeness, perceived behavioural control over IT, desire for growth and familiarity with administration directly affect the process of IT adoption in organization strategy implementation(Wade & Hulland, 2004). Accordingly, the characteristics of CEOs should be taken into consideration in the investigation of strategic activities, such as the adoption of innovation, including IT as a new technology (Ghobakhloo, et.al, 2006). Advanced knowledge provides the firm short term capacity to complete with rival firms who have access to similar knowledge. Innovative knowledge enhances the competitive position of a firm compared to its rivals. According to Kamath, and Desai (2011), technology progress requires a technological change or innovation which calls for an adequate adaptation mechanism that should allow tracking new technology in a company, including technology development needs, change in organizational culture, and setting new personnel tasks. According to Jemala(2012), technology strategy implementation requires the support of top management (especially at the beginning), who should provide visionary leadership and clearly articulate technology needs across the company and also include the management of an existing technology portfolio (Kamath, & Desai, 2011). Through the technological implementation strategy, it is appropriate to integrate individual processes of technological research and practical innovation, innovation requirements and technological education programmes, and technology portfolio management with business needs (Jemala, 2012). According to Kubuta, (2014) the real estate firms should consider using latest technology in their operations in order to reduce their operational cost and offer their services at competitive pricing. Many real estate firms appear to be radical in some sense, either because they are used as part of radical organizational change, they demand people to make significant changes in their lives, or give people significant new opportunities. Sometimes however the change is not as radical in practice as it is in theory. Often technologies offer the possibilities of change that are in fact very slow to develop as they are implemented. Chomba, (2013) concluded that innovation strategies influence growth of real estate development to a great extent these factors include process innovation strategy, product differentiation strategy, technology strategy and innovative customer service strategy. Real estate developers and investors can use smart growth development as a strategy to maximize their economic advantages while improving the quality of life and creating attractive, healthy communities that help protect the environment (Chomba, 2013).

3. **Methodology**

The study was carried out in 78 real estate companies that had a total 234 staff members. A sample of 70 staff members was picked involving the senior, middle and junior level managers. The study employed a descriptive research design. This design was selected due to its suitability in estimating the percentage of units in a target population. According to Coopers and Schindler (2003) descriptive design is appropriate for the study where the objective is to provide comparative description of the population and cases where researcher wishes to discover association among different variables. A structured questionnaire which Consisting of 5 point likert scales was constructed to collect the data from the respondents. A questionnaire was deemed the best method of collecting the data required for this kind of research (Saunders, 2003). The five-point Likert scale measured the items where 5= Strongly Agree, 4= Agree, 3= Neutral, 2 Disagree 1=, Strongly Disagree. To examine the validity of the instrument, a pilot study was carried out before the full scale survey. Consistency of the measurement sets Was ascertained as suggested by Fornell and Larcker, (1981), in addition, reliability test was also carried out on the data. Cronbach's alpha, a coefficient of reliability given by Cronbach (1971), which provides an unprejudiced estimate of data generalization alpha was used (Zinbarg, Revelle, Yovel, & Li, 2005). In this study the results of Cronbach alpha coefficients were 0.822 and 0.789 for technological advancement and strategy implementation respectfully. Data was collected using a self- administered questionnaire where the questionnaire were left with the respondents and picked later. Prior to the regression analysis, the collected data was subjected to several diagnostic tests. According to Field (2009), this process ensured the accuracy of the results as well as the absence of any bias. As a result, the study undertook the normalcy, linearity, Multicollinearity and heteroscedasticity among others tests were conducted. The study analysed data using descriptive statistics for quantitative data through frequency tables, percentages and measure of central tendency and measure of dispersion. Inferential statistics was used to analyse population parameters using estimation or level of significance. Data analysis was done using Statistic Package for Social Science (SPSS), version 26.0. Quantitative reports through tabulations and percentages were generated using Statistical Package for Social Sciences. The regression model shows the following relationship; $Y= \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \varepsilon$; Where: Y =strategy implementation β_0=constantX_1 = organizational culture, X_2= technological progress, X_3=internal communication, X_4=managerial skills and ε = error term. The study sought to establish the influence of technological advancement on the strategy implementation among real estate companies in Nakuru County, Kenya. At a significance level of 0.05, The R value was 0.721, adjusted R square was 0.513 which implied that 51.3% of the variations in the strategy implementation was influenced by technological advancement while the remaining 48.7% of the variations in strategy implementation can be attribute to other factors other than technological advancement.

Table 01: Model Summary for Technological Advancement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721[a]	.520	.513	.474

a. Predictors: (Constant), Technological Advancement

From the Analysis of Variance indicated in table 4.18, the model fit was appropriate for this data since p=0.000 which is less than 0.05 and the F value was 70.386 significant at 0.000. Therefore, the study rejected the null hypothesis that technological advancement has no statistically significant influence on strategy implementation and conclude that indeed technological advancement has a statistically significant influence on the strategy implementation among real estate companies in Nakuru County, Kenya. These findings agree with those of Kihara, Bwisa, and Kihoro (2016) in their study on the role of technology in strategy implementation and performance of manufacturing small and medium firms in Thika, Kenya where they found a positive relationship between technology and implementation of strategy that leads to performance of SME. On the sale Mutua and Amenya (2024) found that information communication technology infrastructure as a key driver for effective and efficient strategic management processes. However, they noted that, organizations should carefully select the type of IT infrastructure, as inappropriate choices can introduce confusion and hinder the seamless flow of the strategic management process.

Table 02 Analysis of ANOVA for Technological Advancement

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.807	1	15.807	70.386	.000[b]
	Residual	14.598	65	.225		
	Total	**30.405**	**66**			

a. Dependent Variable: Strategy Implementation
b. Predictors: (Constant), Technological Advancement

The table 4.19 shows that there is a positive beta coefficient of 0.186 as indicated in the coefficient's matrix with a p-value= 0.00 and a constant of 1.731 with a p-value of 0.000 which is less than 0.05. Hence, both the constant and technological advancement contribute significantly to the model. The model can provide information needed to predict strategy implementation among real estate companies in Nakuru County, Kenya from technological advancement. The regression equation implies that a unit change in technological advancement leads to an increase of positive 0.549 units in strategy implementation and that in the absence of technological advancement the performance will be positive 1.731.

Table 03: Coefficients of Technological Advancement

Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.731	.266		6.508	.000
Technological Advancement	.549	.065	.721	8.390	.000

a. Dependent Variable: Strategy Implementation

4. Conclusion

Based on the findings above, the study concluded that technology advancement has a significant influence on strategy formulation because it offers an integrated body of knowledge, ideas, and methods resulting from a variety of activities conducted in the pursuit of knowledge which promote strategy formulation and implementation. Further, technological advancement allows organizational IT skills to effectively implement the real estate company strategy. This study recommends that the real estate companies should promote technology advancement and offer an integrated body of knowledge, ideas, and methods which allow acquisition of organizational IT skills which can promote effective implementation of strategy and overcome the notion that even with the vast potential of the internet for strategic planning, many organizations had yet to effectively figure out how to harness and take advantage of such technology when it was first becoming available. Also, leveraging a strategic technology approach will allow real estate companies to carve out a unique market position, streamline operations, manage risks robustly, utilize data effectively, enhance customer engagement, and prepare for future technological advancements through effective strategy implementation.

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